

contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 or its complement under hybridization conditions comprising hybridization at 42°C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing at 55°C in 2X SSC and 0.1% SDS.

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2. (Twice amended) The nucleic acid molecule of claim 1, having a nucleotide sequence that hybridizes with a portion of SEQ ID NO:1 or its complement, wherein the portion is selected from the group consisting of :

an open reading frame located between nucleotide 358 and 495;

an open reading frame located between nucleotide 443 and 676;

an open reading frame located between nucleotides 582 and 850;

an open reading frame located between nucleotides 753 and 858;

an open reading frame located between nucleotides 885 and 1047;

an open reading frame on the complementary strand of SEQ ID NO:1 located between nucleotides 757 and 561;

an open reading frame on the complementary strand of SEQ ID NO: 1 located between nucleotides 419 and 312;

wherein the hybridization conditions further comprise washing in 0.1X SSC, 0.1% SDS at 65°C.

3. (Amended) The nucleic acid molecule of claim 2, comprising a portion of SEQ ID NO:1, wherein the portion is selected from the group consisting of :

an open reading frame located between nucleotide 358 and 495;

an open reading frame located between nucleotide 443 and 676;

an open reading frame located between nucleotides 582 and 850;

an open reading frame located between nucleotides 753 and 858;

an open reading frame located between nucleotides 885 and 1047;

an open reading frame on the complementary strand of SEQ ID NO:1 located between nucleotides 757 and 561;

an open reading frame on the complementary strand of SEQ ID NO: 1 located between nucleotides 419 and 312.

5. (Amended) The nucleic acid molecule of claim 4, which encodes a polypeptide having SEQ ID NO:4

6. (Amended) A recombinant DNA molecule comprising the nucleic acid molecule of claim 1, inserted into a vector for transforming cells.

7. (Twice amended) A fungal, bacterial, or plant cell transformed with the recombinant DNA molecule of claim 6.

1² 8. (Twice amended) The cell of claim 7, which is a plant cell that is regenerable into a fertile plant.

9. (Twice amended) The cell of claim 7, which is an epiphytic bacterial cell.

11. (Twice amended) An isolated nucleic acid molecule having a sequence selected from the group consisting of:

a) SEQ ID NO:1;

b) an allelic variant of an isolated nucleic acid comprising SEQ ID NO:1;

c) a segment of SEQ ID NO: 1 selected from the group consisting of:

an open reading frame located between nucleotide 358 and 495;

an open reading frame located between nucleotide 443 and 676;

an open reading frame located between nucleotides 582 and 850;

an open reading frame located between nucleotides 753 and 858;

an open reading frame located between nucleotides 885 and 1047;

an open reading frame on the complementary strand of SEQ ID NO:1 located between nucleotides 757 and 561;

an open reading frame on the complementary strand of SEQ ID NO: 1 located between nucleotides 419 and 312;

d) an allelic variant of the segment of SEQ ID NO:1;

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e) a sequence that hybridizes with any of the sequences of a) - d) or its complement under conditions comprising hybridization at 42°C in 5X SSC, 5X Denhardt's reagent, 7% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.125M NaHPO₄, 50% formamide and 1 mM EDTA, rinsing with 2X SSC at room temperature, and washing at 65°C in 2X SSC, followed by 65°C in 0.1X SSC and 0.1% SDS; and

f) a sequence encoding a polypeptide having an amino acid sequence comprising any one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7 or SEQ ID NO:8.

13. (Amended) A recombinant DNA molecule comprising the nucleic acid molecule of claim 11, inserted into a vector for transforming cells.

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14. (Twice amended) A bacterial, fungal, or plant cell transformed with the recombinant DNA molecule of claim 13.

15. (Twice amended) The cell of claim 14, which is a plant cell that is regenerable into a fertile plant.

16. (Amended) The cell of claim 14, which is an epiphytic bacterial cell.

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25. (Amended) A transgenic epiphytic bacterium that expresses a portion of an isolated nucleic acid molecule from *Magnaporthe grisea* comprising a segment of chromosome 1 approximately 1 kb in size and containing at least one open reading frame, the segment conferring rice cultivar CO39-specific avirulence to microorganisms that contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 under hybridization conditions comprising hybridization at 42°C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing at 55°C in 2X SSC and 0.1% SDS.

26. (Twice amended) The transgenic epiphytic bacterium of claim 24, which expresses the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, or an allelic variant thereof.